

Appl. No. 10/084,650  
Amdt. Dated June 8, 2007  
Reply to Office Action of March 9, 2007

## **REMARKS**

Claims 1-16 stand rejected in this application. Claims 1-4 have been cancelled, without prejudice. Independent claims 5, 10 and 13 have been amended. The Applicant respectfully submits that each of claims 5-16 is in condition for allowance.

### **35 U.S.C. 101 Rejections**

Claims 5-9 stand rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Claim 5 has been amended to clarify that the system comprises an object-oriented library comprising library objects used to produce a new generator. The produced generator is for use in performing a simulation to obtain prices for a plurality of instruments over a plurality of scenarios. Support for these amendments can be found in original claims 10 and 13, and throughout the specification (see e.g. paragraphs [0144]-[0157]). No new matter has been added.

The produced generator is a useful, concrete, and tangible object, that can be passed between risk management software application components and that can provide data on demand, eliminating the need for data files (see e.g. paragraphs [0008], [0132]). Withdrawal of this rejection is respectfully requested.

### **35 U.S.C. 103 Rejections**

Claims 5-9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Microsoft Excel 2000 ("Excel") in view of Browne et al. ("Browne", U.S. PG-Pub 2003/0014356 A1). Claims 10, 11, 13 and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Browne in view of Excel. Claims 12, 15 and 16 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Browne, in view of Excel and Dembo et al. ("Dembo").

Claim 5 has been amended to further clarify that the system is for use in developing risk management software and comprises an object-oriented library comprising a first plurality of library objects for use in generating scenarios, a second plurality of library objects for calculating instrument values, and a third plurality of objects comprising a plurality of operations, and wherein the objects are used to produce a new generator for use in performing a simulation. Support for these amendments can be found in original claims 10 and 13, and throughout the specification (see e.g. paragraphs [0144]-[0157]). No new matter has been added.

Similarly, claims 10 and 13 have been amended to more explicitly recite methods of developing a risk management application using objects from an object-oriented library. For consistency, claims 10 and 13 have also been amended to recite particular properties of the pricing maps and pricing accumulators respectively as recited in original claim 5. No new matter has been added.

The claimed embodiments of the systems and methods of the Applicant's teachings relate generally to a specialized set of "tools", for use in developing risk management applications where portfolios of financial instruments are simulated. In particular, these "tools" include at least generators for creating scenarios, and pricing maps and/or accumulators for calculating instrument values.

In contrast to Browne, which is generally directed to a particular method of performing simulations, the Applicant's system and method provides software development tools to developers, namely library objects that are particularly suitable for performing simulations in risk management applications.

The Examiner cites paragraphs [0004] and [0006] of Browne as disclosing the generators, pricing maps and/or accumulators of the Applicant's claims.

However, persons skilled in the art would not interpret these or any other paragraphs in Browne as disclosing these library objects, as Browne does not teach the provision of library objects for software application development. The paragraphs cited by the Examiner indicate generally that risk factors may be used to simulate prices of instruments, and that price and value distributions can then be generated for use in determining a value at risk of a portfolio. A known parametric simulation technique is also described. However, persons skilled in the art would understand that it is not possible to arrive at the Applicant's invention by combining the teachings of Browne with any of the other cited references.

Similarly, Excel is not directed to a system and method that provides software development tools to developers, namely library objects that are particularly suitable for performing simulations in risk management applications.

Excel is a generic application that might be used to calculate anything, by manipulating numeric values, given sufficient effort. However, the Applicant's system and method provides a specialized set of "tools" that makes it much easier to solve a specific subset of problems, namely the simulation of portfolios.

The library objects provided by the Applicant's system and method, with the claimed properties, allow bigger and more complex simulation problems to be solved, with less programming effort. Solving similar problems using the Excel application would be impractical, and not an alternative that would be seriously considered by persons skilled in the art. Without the level of abstraction and specific functionalities of the Applicant's generators, maps and/or accumulators, Excel, either alone or in combination with any of the other cited references, would not, for example, support fast run-time constructions and manipulations of complex sequential process generators (see e.g. paragraphs [0016]-[0021] of the Applicant's specification).

Furthermore, the Applicant's generators, maps and accumulators can be passed as parameters to various constructor methods and/or software routines in risk management applications, eliminating the need for the maintenance of data files. Excel does not teach the provision of similar constructs.

In summary, the Applicant's system and method is directed to a specific, specialized set of library objects, which provide extended functionality when compared to generic applications (e.g. Excel), yet are well-suited for use in developing risk management applications that simulate portfolios of financial instruments. These library objects are neither taught nor suggested in Excel, Browne, or any other reference cited by the Examiner.

For the foregoing reasons, the Applicant submits that independent claims 5, 10 and 13 are not obvious in view of Excel or Browne, taken alone or in combination with any of the other cited references. It is submitted that the remaining dependent claims of record are also patentable for the same reasons. Withdrawal of the rejections under 35 U.S.C. 103 is respectfully requested.

Finally, in paragraph 9 of the office action, the Examiner makes reference to the Applicant's Mark to Future methodology. It is respectfully noted that the Mark to Future methodology is not being claimed in the present application. In one embodiment, data generated by a generator may be used to populate a Mark-to-Future cube. For example, as described at paragraph [0045] of the Applicant's specification, a pricing generator can be directly used by an application component to populate a Mark-to-Future cube, which can then be subsequently used and processed in known manner. This is merely one specific application of the Applicant's claimed generators, which is not disclosed in the prior art.

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All objections have now been addressed. However, if the Examiner deems that any issue remains after considering the response, he is invited to call the undersigned to expedite the prosecution and work out any such issue by telephone.

Respectfully submitted,

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